

5th October 2026

ocdl
O'Callaghan Design Ltd
3 Lochiel Rd
Khandallah
Wellington, 6035
Phone: [REDACTED]
Email: [REDACTED]

Waikanae North Development – FTAA-2603-1194, Response to Fast Track Panel on Interpretation of a Dam Relating to the Downstream Flood Control Structure

During expert caucusing relating to flooding, GWRC queried whether the downstream flow control structure could be a classifiable dam in terms of the Dam Safety Guidelines 2024 (paragraph 15 of the JWS). A classifiable dam is determined by the Building (Dam Safety) Regulations 2022.

Regulation 5 of the Building (Dam Safety) Regulations 2022 states:

5 Meaning of classifiable dam

- (1) For the purposes of the Act, **classifiable dam** means a dam that has a height of 4 or more metres and stores 20,000 or more cubic metres volume of water or other fluid.
- (2) [Regulations 6 and 7](#) apply for the purposes of assessing whether a dam is a classifiable dam.

Regulation 5(1): replaced, on 13 May 2024, by [regulation 4](#) of the Building (Dam Safety) Amendment Regulations 2024 (SL 2024/58).

Regulation 6 states:

6 Height of dam

A dam's height must be measured for the purposes of [regulation 5](#) in accordance with [section 133B](#) of the Act.

Section 133B of the Act states:

133B Measurement of dams

For the purposes of this Act and any regulations made under it, the height of a dam is the vertical distance from the crest of the dam and must be measured,—

- (a) in the case of a dam across a stream, from the natural bed of the stream at the lowest downstream outside limit of the dam; and
- (b) in the case of a dam not across a stream, from the lowest elevation at the outside limit of the dam; and
- (c) in the case of a canal, from the invert of the canal.

Section 133B: inserted, on 28 November 2013, by [section 38](#) of the Building Amendment Act 2013 (2013 No 100).

Notification of classifiable or referable dam

Heading: inserted, on 28 November 2013, by [section 38](#) of the Building Amendment Act 2013 (2013 No 100).

Regulation 7 is not relevant to this situation because it deals with situations where water is stored at a level below the lowest point of the structure and that does not arise at the Waikanae North Development site.

At the Waikanae North Development site the volume of stored water in a 1% AEP event, with allowance for climate change, is expected to store approximately 10 times the 20,000m³ threshold in Regulation 5 and thus passes that test. However, Regulation 5 requires a dam height of 4m or more for the structure to be a classifiable dam. The top of the structure (if it were

a classifiable dam) is well defined by the overflow crest, which is set at RL6.3m (2016VD), as described in Section 7.4 of the Engineering and Infrastructure Report attached to the application.

Section 133B of the Building (Dam Safety) Regulations 2022 defines the bottom level of the dam as the natural bed of the stream at the lowest downstream outside limit of the dam. At the Waikanae North Development site, the downstream natural bed level is the bed at the inlet of the existing culvert immediately downstream of the flow control structure. This was surveyed as part of our design process and has a level of RL4.04 (2016VD). The height of the structure in “dam height” terms is therefore 2.26m.

As the height of the flow control structure is less than 4m as measured in terms of Section 133B, the flow control structure cannot be defined as a classifiable dam in terms of the Building (Dam Safety) Regulations 2022.

We trust this clarifies this matter for the panel.



Ray O'Callaghan
Director
CPEng (No 57868)
O'Callaghan Design Ltd